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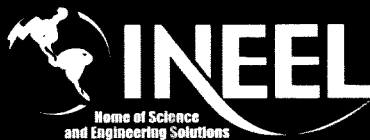
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July 2001



U.S. Department of Energy
Idaho Operations Office

***INEEL CERCLA Disposal Facility
Remedial Design/Remedial Action
Work Plan/Title II Design – Annotated Outline
(Title I)***



Idaho National Engineering and Environmental Laboratory

**INEEL CERCLA Disposal Facility Remedial
Design/Remedial Action Work Plan/Title II Design –
Annotated Outline (Title I)**

July 2001

**Prepared for the
U.S. Department of Energy
Idaho Operations Office**

ABSTRACT

The Remedial Design/Remedial Action Work Plan provides the framework for defining the remedial design requirements, preparing the design documentation, and defining and implementing the construction phase for the INEEL CERCLA Disposal Facility landfill, evaporation pond, and associated components at Operable Unit 3-13. This facility will be an engineered facility meeting the substantive Resource Conservation and Recovery Act, Subtitle C, and Toxic Substances Control Act design and construction requirements.

In addition to the work plan, other supporting documents include the health and safety plan, the operations and maintenance plan, the waste management plan, the long-term monitoring plan, and the monitoring system and installation plan.

CONTENTS

| | |
|---|-----|
| ABSTRACT | iii |
| ACRONYMS..... | ix |
| 1. INTRODUCTION..... | 1-1 |
| 1.1 Work Plan Organization | 1-1 |
| 1.2 Background..... | 1-1 |
| 1.3 Selected Remedy..... | 1-1 |
| 1.3.1 Description of Selected Remedy..... | 1-1 |
| 2. DESIGN BASIS..... | 2-1 |
| 2.1 General Description of the Project Components | 2-1 |
| 2.1.1 Support Facilities | 2-1 |
| 2.1.2 Electrical Power..... | 2-1 |
| 2.1.3 Title III Services | 2-1 |
| 2.2 Design Criteria..... | 2-1 |
| 2.2.1 Internal Procedures | 2-1 |
| 2.2.2 ICDF Crest Pad Building..... | 2-2 |
| 2.2.3 Evaporation Pond Crest Pad Building | 2-2 |
| 2.2.4 Test Pad | 2-3 |
| 2.2.5 Excavation | 2-3 |
| 2.2.6 ICDF Landfill | 2-3 |
| 2.2.7 Leachate Collection System..... | 2-4 |
| 2.2.8 ICDF Evaporation Pond | 2-4 |
| 2.2.9 Final Composite Cover..... | 2-5 |
| 2.2.10 Water Management..... | 2-5 |
| 2.2.11 Site Development..... | 2-5 |
| 2.3 DOE Related Codes, Standards, and Documents | 2-5 |
| 2.4 Engineering Standards | 2-5 |
| 2.5 Environmental and Safety..... | 2-6 |
| 2.6 General Design Assumptions..... | 2-6 |
| 2.7 Site-Specific Design Assumptions..... | 2-6 |
| 2.8 Quality Assurance..... | 2-6 |
| 3. REMEDIAL DESIGN..... | 3-1 |

| | | |
|-------|--|-----|
| 3.1 | Project Site..... | 3-1 |
| 3.2 | Physical Site Description..... | 3-1 |
| 3.3 | Design Studies | 3-1 |
| 3.3.1 | Fate and Transport Modeling..... | 3-1 |
| 3.3.2 | ICDF Landfill Waste Acceptance Criteria..... | 3-1 |
| 3.3.3 | ICDF Evaporation Pond Waste Acceptance Criteria..... | 3-1 |
| 3.4 | Site Preparation..... | 3-1 |
| 3.5 | Earthwork | 3-2 |
| 3.6 | Liner Installation..... | 3-2 |
| 3.7 | Piping..... | 3-2 |
| 3.8 | Warning Signs and Brass Corner Markers | 3-2 |
| 3.9 | Surface Water | 3-2 |
| 3.10 | Erosion Protection | 3-2 |
| 3.11 | Subcontractor Staging..... | 3-3 |
| 3.12 | Groundwater Monitoring | 3-3 |
| 4. | HUMAN HEALTH AND ENVIRONMENTAL COMPLIANCE..... | 4-1 |
| 4.1 | Remedial Action Objectives | 4-1 |
| 4.2 | Applicable or Relevant and Appropriate Requirements | 4-1 |
| 4.3 | Compliance Strategy..... | 4-1 |
| 5. | REMEDIAL ACTION WORK PLAN | 5-1 |
| 5.1 | Relevant Changes to the RD/RA Scope of Work and ARARs..... | 5-1 |
| 5.2 | Subcontracting Plan | 5-1 |
| 5.3 | Field Oversight/Construction Management..... | 5-1 |
| 5.4 | Project Cost Estimate..... | 5-1 |
| 5.5 | Project Schedule and Sequencing | 5-1 |
| 5.6 | Remedial Action Work Tasks..... | 5-1 |
| 5.6.1 | Premobilization..... | 5-1 |
| 5.6.2 | Mobilization..... | 5-1 |

| | | |
|---|--|-----|
| 5.6.3 | Borrow, Haul, and Stockpile | 5-2 |
| 5.6.4 | Storm Water Management and Sediment Control | 5-2 |
| 5.6.5 | Clearing and Grubbing the Sites | 5-2 |
| 5.6.6 | Construction Activities | 5-2 |
| 5.6.7 | Security and Inspections | 5-3 |
| 5.6.8 | Soil Excavation | 5-3 |
| 5.6.9 | Soil Consolidation | 5-3 |
| 5.6.10 | Dust Control | 5-3 |
| 5.6.11 | ICDF Landfill | 5-3 |
| 5.6.12 | ICDF Evaporation Pond | 5-3 |
| 5.6.13 | Crest Buildings | 5-3 |
| 5.6.14 | Test Pad | 5-3 |
| 5.6.15 | ICDF Landfill Liner Construction | 5-3 |
| 5.6.16 | ICDF Evaporation Pond Liner Construction | 5-3 |
| 5.6.17 | Instrumentation | 5-4 |
| 5.6.18 | Leachate Collection System | 5-4 |
| 5.6.19 | Earthwork | 5-4 |
| 5.6.20 | Reclamation Seeding | 5-4 |
| 5.6.21 | Institutional Controls | 5-4 |
| 5.6.22 | Demobilization | 5-4 |
| 5.7 | Field Oversight/Construction Management | 5-4 |
| 5.8 | Inspections | 5-4 |
| 5.9 | Operation and Maintenance Plan | 5-4 |
| 5.10 | Protocol and Coordination of Field Oversight | 5-4 |
| 5.11 | Waste Minimization Plan | 5-5 |
| 5.12 | Health and Safety Plan | 5-5 |
| 5.13 | Waste Management Plan | 5-5 |
| 6. | FIVE YEAR REVIEW | 6-1 |
| 7. | REFERENCES | 7-1 |
| Appendix A—Documentation of the Safety Category of Structures, Systems, and Components (not included with this draft) | | |
| Appendix B—Detailed Cost Estimate (not included with this draft) | | |
| Appendix C—Applicable or Relevant and Appropriate Requirements | | |
| Appendix D—Air Emissions Modeling Results (not included with this draft) | | |
| Appendix E—Groundwater Monitoring Plan (not included with this draft) | | |

**Appendix F—Comment Resolution Forms for the Draft Remedial Design/Remedial Action Work Plan
and Associated Documents (not included with this draft)**

Appendix G—Detailed Operating Procedures (not included with this draft)

ACRONYMS

| | |
|---------------|---|
| AOC | area of contamination |
| ARAR | applicable or relevant and appropriate requirement |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| EDF | engineering design file |
| EPA | Environmental Protection Agency |
| FFA/CO | Federal Facility Agreement and Consent Order |
| HDPE | high density polyethylene |
| ICDF | INEEL CERCLA Disposal Facility |
| IDEQ | Idaho Department of Environmental Quality |
| INEEL | Idaho National Engineering and Environmental Laboratory |
| INTEC | Idaho Nuclear Technology and Engineering Center |
| IPs | internal procedures |
| PCB | polychlorinated biphenyl |
| RA | remedial action |
| RAOs | remedial action objectives |
| RCRA | Resource Conservation and Recovery Act |
| RD | remedial design |
| RD/RA | Remedial Design/Remedial Action |
| ROD | Record of Decision |
| SOW | Scope of Work |
| TSCA | Toxic Substances Control Act |

WAG

waste area group

INEEL CERCLA Disposal Facility Remedial Design/Remedial Action Work Plan/Title II Design – Annotated Outline (Title I)

1. INTRODUCTION

Section 1 will provide a brief background identifying the need for this Remedial Design/Remedial Action (RD/RA) Work Plan, and identify the Work Plan's overall objectives. Relevant general arrangement drawings or figures may be added to support discussions.

In accordance with the Idaho National Engineering and Environmental Laboratory (INEEL) Federal Facility Agreement and Consent Order (FFA/CO) with the U.S. Department of Energy Idaho Operations Office (DOE-ID), the DOE-ID submits the following Remedial Design/Remedial Action (RD/RA) Work Plan for the Design and Construction of the INEEL CERCLA Disposal Facility (ICDF) at the Idaho Nuclear Technology and Engineering Center (INTEC) in Waste Area Group (WAG) 3. The RD/RA activities identified in this Work Plan, as part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, will proceed in accordance with the signed OU 3-13 Record of Decision (ROD) (DOE-ID 1999) and the RD/RA Scope of Work (SOW) (DOE-ID 2000a) for WAG 3, OU 3-13.

This RD/RA Work Plan provides the framework for defining the remedial design requirements, preparing the design documentation, and defining and implementing the construction of the ICDF at INTEC, one of the major components of the selected remedy for the Group 3 Other Surface Soils.

1.1 Work Plan Organization

This section will provide an overview of each major section (Sections 1-7) of the work plan, attachments, and appendices.

1.2 Background

This section will provide a brief description of the INEEL, followed by a general introduction to the INTEC.

1.3 Selected Remedy

This section will identify the selected remedy outlined in the final ROD for OU 3-13 that specifies the construction of the ICDF Complex, and summarize the relevant major components as they relate to the ICDF Complex.

1.3.1 Description of Selected Remedy

Removal and On-Site Disposal in the ICDF Complex is the selected remedy for Group 3, referred to as "Other Surface Soils" and one of seven groups of major release sites at WAG 3. The ICDF Complex, proposed for construction at INTEC, will allow on-Site disposal of WAG 3 and other CERCLA-generated remediation wastes at INEEL, and its construction is a major component of the selected remedy:

- Construct the ICDF Complex, which will include an engineered facility meeting DOE Order 435.1, Resource Conservation and Recovery Act (RCRA) Subtitle C, Idaho Hazardous Waste Management Act and Toxic Substances Control Act (TSCA) polychlorinated biphenyl (PCB) landfill design and construction requirements. The ICDF Complex will be located within the WAG 3 area of contamination (AOC).

2. DESIGN BASIS

Section 2 will identify the project components, discuss the engineering design basis and criteria for the ICDF landfill, the ICDF evaporation pond, and associated components, and identify relevant design codes, standards, assumptions, and quality assurance goals. Relevant general arrangement drawings or figures may be added to support discussions.

2.1 General Description of the Project Components

This section will provide a brief summary of each of the project components (support facilities, electrical power, and Title III services) that will support the construction of the ICDF landfill, the ICDF evaporation pond, and associated components.

2.1.1 Support Facilities

A brief discussion of the crest pad building and evaporation pond crest pad building, and test pad will be provided in this section. In addition, other support facilities to be used in any stage of construction will be identified. The ICDF evaporation pond will not be included in this discussion, as it is not considered to be a support facility.

2.1.2 Electrical Power

A brief summary will be provided of the electrical power project components and will refer to the appropriate specifications.

2.1.3 Title III Services

A brief summary of the Title III services associated with the ICDF landfill, the ICDF evaporation pond, and associated components will be provided, as well as the associated details regarding the types of services, the schedules of provided services, and the level of support that will be required.

2.2 Design Criteria

Section 2.2 will briefly reiterate that the purpose of the ICDF landfill, the ICDF evaporation pond, and associated components is to serve as a disposal facility for waste generated on-Site during CERCLA actions.

Additionally, Section 2.2 will reference or identify the criteria associated with the general design, such as siting restrictions, performance requirements, environmental regulatory requirements and/or site and operating requirements, and natural phenomena requirements, as appropriate.

Section 2.2 will also identify the relevant Internal Procedures (IPs) and specifications that are associated with completing the design, and identify design criteria for each component of the ICDF Complex.

2.2.1 Internal Procedures

This section will identify the general areas for which IPs will be required to ensure proper completion of the ICDF landfill, the ICDF evaporation pond, and associated components. Appendix C identifies the applicable or relevant and appropriate regulations (ARARs) as they relate to the areas identified below.

A preliminary listing of the areas to which IPs will apply include:

- Engineering design
- Emergency preparedness and management
- Fire protection
- Management systems
- Occupational safety and health
- Radiological protection
- Security
- Environmental restoration
- Waste management
- Conduct of maintenance
- Quality.

2.2.2 ICDF Crest Pad Building

This section will include a discussion of the design requirements for the ICDF Crest Pad Building. Additional supporting specifications or documents will be referenced, including:

- 03301 – Reinforced Concrete
- 13122 – Metal Building Systems
- 160010 – Basic Requirements
- 16050 – Basic Materials and Methods
- 16500 – Lighting
- 16720 – Fire Alarm Systems.

2.2.3 Evaporation Pond Crest Pad Building

This section will include a discussion of the design requirements for the evaporation pond Crest Pad Building, and additional supporting specifications or documents. The following specifications will be discussed or referenced:

- 03301 – Reinforced Concrete
- 13122 – Metal Building Systems

- 160010 – Basic Requirements
- 16050 – Basic Materials and Methods
- 16500 – Lighting
- 16720 – Fire Alarm Systems.

2.2.4 Test Pad

This section will include a brief discussion of the design requirements for the test pad and will include references or discussion of any specifications or supporting documents. The following specifications will be identified:

- 02319 – Subgrade Preparation
- 02666 – Soil Bentonite Liner
- SPC-1475 – Clay Liner and Test Pad Development, Placement, and Testing Specification.

2.2.5 Excavation

This section will summarize the excavation activities at the ICDF landfill, the ICDF evaporation pond, and associated components. Relevant information from SPC-1475 (Excavation Specification for the ICDF landfill and evaporation pond), and Specification 02316 (Excavation) will be referenced or included in this discussion.

2.2.6 ICDF Landfill

This section will include a discussion of the design requirements for the ICDF landfill. In addition, Phase I and Phase II specifications that are associated with site construction, concrete, equipment, mechanical, and electrical components will be provided, as will any engineering design files (EDFs) or documents that support the ICDF landfill design criteria. A brief discussion will also be provided of the design basis of the groundwater monitoring system.

The following EDFs and reports developed for the ICDF design will be referenced in this discussion:

- EDF-ER-265 – Air Space Volume Calculations (DOE-ID 2001a)
- EDF-ER-266 – Subsurface Consolidation Calculations (DOE-ID 2001b)
- EDF-ER-267 – Landfill Compaction/Subsidence Study (DOE-ID 2001c)
- EDF-ER-268 – Slope Stability Assessments (DOE-ID 2001d)
- EDF-ER-269 – Leachate Generation Study (DOE-ID 2001e)
- EDF-ER-270 – Storm Water Drainage Calculations (DOE-ID 2001f)

- EDF-ER-271 – Evaporation Pond Sizing with Water Balance and Make-up Water Calculations (DOE-ID 2001g)
- EDF-ER-272 – Soil Amendment Study (DOE-ID 2001h)
- EDF-ER-273 – Permeable Reactive Barrier Decision Analysis (DOE-ID 2001i)
- EDF-ER-274 – Leachate/Contaminant Reduction Time Study (DOE-ID 2001j)
- EDF-ER-275 – Fate and Transport Modeling Results and Summary Report (DOE-ID 2001k)
- EDF-ER-276 – Evaluation of Geotechnical Investigations and Calculations Required to Complete Design and Construction (DOE-ID 2001l)
- EDF-ER-277 – Waste-Soil Design Ratio Calculations (DOE-ID 2001m)
- EDF-ER-278 – Liner/Leachate Compatibility Study (DOE-ID 2001n)
- EDF-ER-279 – Hydrologic Modeling of Final Cover (DOE-ID 2001o)
- EDF-ER-280 – Leachate Collection System Design Analysis (DOE-ID 2001p)
- EDF-ER-281 – Liner and Final Cover Long-Term Performance Evaluation and Final Cover Life Cycle Expectation (DOE-ID 2001q)
- EDF-ER-282 – Seismic Evaluation of Landfill and Evaporation Pond (DOE-ID 2001r)
- DOE/ID-10865 – Waste Acceptance Criteria for ICDF Landfill (DOE-ID 2001s)
- DOE/ID-10866 – Waste Acceptance Criteria for ICDF Evaporation Pond (DOE-ID 2001t)
- EDF-ER-286 – Waste Placement Plan (DOE-ID 2001u)
- DOE/ID-10782 – Group 5 Monitoring System and Installation Plan (DOE-ID 2001v)
- DOE/ID-10783 – Group 5 Long Term Monitoring Plan (DOE-ID 2001w)

2.2.7 Leachate Collection System

This section will include a discussion of the design requirements for the leachate collection system. In addition, any additional documents or specifications that support the design, such as EDF-ER-280 (Leachate Collection System Design Analysis), will be referenced in this discussion.

2.2.8 ICDF Evaporation Pond

This section will include a discussion of the design requirements for the ICDF evaporation pond. Additional supporting specifications or documents will be provided in this discussion, such as SPC-1475 (Excavation Specification for the ICDF landfill and the ICDF evaporation pond).

The following EDFs will be referenced in this discussion:

- EDF-ER-271 – Evaporation Pond Sizing with Water Balance and Make-up Water Calculations (DOE-ID 2001g)

2.2.9 Final Composite Cover

This section will include a discussion of the final composite cover and Section 5.6 of SPC-332, and will discuss or reference appropriate documents. In addition, this section will include discussion of the design as it pertains to issues of biointrusion and the expected design life.

2.2.10 Water Management

This section will include a brief discussion of the regulatory and/or site and operation requirements for storm water management, and will include any supporting specifications and documents. The following specifications and/or documents will be discussed or referenced:

- 02316 – Excavation
- 02319 – Subgrade Preparation
- 02340 – Soil Stabilization
- 02631 – Catch Basins and Inlets
- SPC-1475 – Storm Water Management Specification
- EDF-ER-270 – Storm Water Drainage Calculations (DOE-ID 2001f)

2.2.11 Site Development

This section will include a brief discussion of specifications or documents supporting site development. The following specifications will be discussed or referenced:

- 02518 – Water Service
- 02555 – Asphalt Concrete Pavement
- 02821 – Chain Link Fence and Gates.

2.3 DOE Related Codes, Standards, and Documents

This section will provide a listing of national and subtier standards, codes and regulations, and site-specific documents that will support the design basis of the ICDF Complex.

2.4 Engineering Standards

This section will provide a summary of the latest engineering standards and their associated specifications.

2.5 Environmental and Safety

In this section, ARARs will be identified and/or the appropriate section (Section 4) or appendix (Appendix C) will be referenced.

2.6 General Design Assumptions

This section will summarize the bounding general design assumptions associated with the ICDF landfill, the ICDF evaporation pond, and associated components and/or reference the OU 3-13 RD/RA SOW, which provides a listing of these assumptions, and identify any additional assumptions.

2.7 Site-Specific Design Assumptions

This section will provide a summary of the site-specific design assumptions for the following:

- ICDF landfill
- Leachate collection system
- ICDF evaporation pond
- Crest buildings.

2.8 Quality Assurance

This section will identify the quality level designations for all activities associated with the ICDF Complex. Such designations will be defined through the use of Environmental Restoration documents that will govern functional activity, organization, and quality assurance/quality control protocols. The following documents will be identified in this section:

- DOE/ID-10849 – INEEL CERCLA Disposal Facility Construction Quality Assurance Plan for Excavation and Constructing and Testing of Clay Liner and Test Pad (DOE-ID 2001x)
- DOE/ID-10851 – Construction Quality Assurance Plan for INEEL CERCLA Disposal Facility (DOE-ID 2001y)
- Quality Assurance and Quality Control for Waste Containment Facilities, EPA, September 1995 (EPA/600/SR-93/182)
- EPA Requirements for Quality Assurance Project Plans, EPA, March 2001 (EPA QA/R-5)
- 10 CFR 830.120, Title 10, "Energy," Part 830, "Nuclear Safety Management," Subpart A, "Quality Assurance Requirements," Section 8, "Scope," *Code of Federal Regulations*.

3. REMEDIAL DESIGN

3.1 Project Site

This section will summarize the remedial design of the ICDF landfill, the ICDF evaporation pond, and associated components. This design was developed in accordance with the engineering design criteria presented in Section 2. ICDF Complex drawings (final numbers to be assigned) and specifications will be referenced, and discussions or references to relevant EDFs that describe the design details more specifically will be provided.

3.2 Physical Site Description

This section will provide a discussion of the locations of the ICDF landfill, the ICDF evaporation pond, and the associated components, and will include a description of the site, and any other pertinent information.

3.3 Design Studies

Section 3.3 will summarize design studies being performed to support the ICDF landfill and the ICDF evaporation pond design. Each subheading identified below will include a discussion of the types of studies being conducted, results, assumptions, and conclusions. Any separate EDFs or summary documents regarding design studies will be referenced or discussed in each subheading.

3.3.1 Fate and Transport Modeling

This section will provide a brief summary of fate and transport modeling studies performed to support the ICDF Complex design. The "Fate and Transport Modeling Results and Summary Report" (DOE-ID 2001k) will also be referenced.

3.3.2 ICDF Landfill Waste Acceptance Criteria

This section will provide a brief summary of the development of the waste acceptance criteria for the ICDF landfill. The document identifying these waste acceptance criteria, "Waste Acceptance Criteria for the ICDF Landfill" (DOE-ID 2001s), will also be identified

3.3.3 ICDF Evaporation Pond Waste Acceptance Criteria

This section will provide a brief summary of development of the waste acceptance criteria for the ICDF evaporation pond. The "Waste Acceptance Criteria for ICDF Evaporation Pond" (DOE-ID 2001t) will also be referenced.

3.4 Site Preparation

This section will identify the major equipment and work elements required to implement and complete the ICDF landfill and the ICDF evaporation pond, and associated structures that are a part of this remedial action, identify the types of preparatory activities, and identify the relevant specifications that are associated with the work elements, such as Specification 02200 - Site Preparation.

3.5 Earthwork

This section will identify earthwork activities and details of the sites listed below and, where relevant and appropriate, will discuss the volume flow rates and quantity estimates.

- ICDF landfill
- Leachate collection system
- ICDF evaporation pond
- Crest buildings.

3.6 Liner Installation

This section will provide a discussion of tasks required to be completed prior to liner installation. Appropriate specifications will be identified.

3.7 Piping

This section will provide a discussion of tasks required to be completed prior to installation of piping. In addition, the following additional specifications will be referenced:

- 15060 – Piping – General
- 15060-14 – High density polyethylene (HDPE) Pipe
- 15992 – Piping Leakage Testing.

3.8 Warning Signs and Brass Corner Markers

This section will provide a summary of the measures that will be taken to install warning signs and brass corner markers as dictated by IPs, Public Notices, DOE Orders, and ARARs. Other specifications or documents discussing placement of warning signs and brass corner markers will be identified.

3.9 Surface Water

This section will provide a summary of measures that will be taken to control movement of surface water. Factors such as snow accumulation will be addressed in the operation and maintenance plan identified in Section 5.

3.10 Erosion Protection

This section will provide a summary of measures that will be taken to ensure protection from erosion.

3.11 Subcontractor Staging

This section will provide a discussion explaining how the subcontractor will stage work and equipment to ensure efficient completion of tasks.

3.12 Groundwater Monitoring

This section will provide a discussion of the groundwater monitoring plan and identify an appropriate reference. The following documents will be referenced:

- DOE/ID-10782 – Group 5 Monitoring System and Installation Plan (DOE-ID 2001v)
- DOE/ID-10783 – Group 5 Long Term Monitoring Plan (DOE-ID 2001w)

4. HUMAN HEALTH AND ENVIRONMENTAL COMPLIANCE

This section will discuss remedial action objectives (RAOs), ARARs, and the Compliance Strategy associated with this RD/RA Work Plan. In addition, where appropriate, the short-term risk evaluation for workers will be discussed.

4.1 Remedial Action Objectives

This section will provide the basis for the determination of the RAOs, and identify applicable RAOs as identified in the OU 3-13 ROD.

4.2 Applicable or Relevant and Appropriate Requirements

This section will provide a general discussion of the ARARs from the OU 3-13 ROD, and reference Appendix C, which provides a detailed table of the ARARs.

4.3 Compliance Strategy

This section will provide a discussion defining how objectives will be met and how requirements of ARARs either have been addressed by remedial design or will be addressed during the remedial action. In addition, a general discussion of the ARAR compliance matrix, including references to Appendix C, will be presented.

5. REMEDIAL ACTION WORK PLAN

This section describes the management approach to conducting the RA, work elements, schedule, and completing the documentation required to implement the RD outlined in Sections 1 through 4. It is noted that because the RD and the RA work plan are combined into one document, some details of implementation have been described in the design portion of the document for clarity.

(Page 4-7 of the SOW discusses elements of the RA work plan, which may be identified in Section 5.)

5.1 Relevant Changes to the RD/RA Scope of Work and ARARs

This section will identify any relevant changes to the RD/RA SOW and ARARs.

5.2 Subcontracting Plan

This section will identify work elements associated with the RA (earthwork, liner installation, piping, surface water, and erosion), and the plan for completion of work.

5.3 Field Oversight/Construction Management

This section will identify the overall organization of management in the field.

5.4 Project Cost Estimate

This section will reference the detailed cost estimate provided in Appendix B of this document.

5.5 Project Schedule and Sequencing

This section will identify the project schedule and work element strategy for the completion of RA activities, and provide discussion or references as necessary.

5.6 Remedial Action Work Tasks

This section will identify the RA work tasks that will be performed by the subcontractor to complete the project. The following subsections will discuss the tasks in further detail.

5.6.1 Premobilization

This section will identify all areas in which the subcontractor must comply prior to mobilization (training documentation, paperwork, etc.).

5.6.2 Mobilization

This section will describe work that must be done by the subcontractor in preparation for construction activities. The activities will include the following:

- High- and medium-voltage electrical power supply systems
- Low-voltage electrical power supply systems

- Raw water and fire water systems.

5.6.3 Borrow, Haul, and Stockpile

This section will identify both borrow sources and the overall plan for borrowing, hauling, and stockpiling soil to specified places in support of the ICDF landfill, the ICDF evaporation pond, and associated components.

5.6.4 Storm Water Management and Sediment Control

This section will summarize control measures and identify specifications as they relate to management of storm water and control of sediment. It will be noted that work will be done in compliance with the INEEL requirements (DOE-ID 2001z).

5.6.5 Clearing and Grubbing the Sites

This section will summarize the overall plan for clearing and grubbing, identify locations that will require such activities, and identify the appropriate performance specifications.

5.6.6 Construction Activities

This section will identify the types of construction activities that will be required in this RA, and provide a discussion or identify a specification outlining the given activity in the below subsections.

5.6.6.1 Bentonite Clay Mix. A brief summary of this activity will be provided.

5.6.6.2 Transport, Placement, and Compaction of Bentonite Clay. A brief summary of this activity will be provided.

5.6.6.3 Primary and Secondary Geomembrane Liners. A brief summary of this activity will be provided.

5.6.6.4 Leachate Collection Recovery System. A brief summary of this activity will be provided.

5.6.6.5 Transportation, Placement, and Compaction of Layers. A brief summary of this activity will be provided.

5.6.6.6 Site Roadways and ICDF Landfill Access Ramps. A brief summary of this activity will be provided.

5.6.6.7 Drainage Culverts and Ditch Areas. A brief summary of this activity will be provided.

5.6.6.8 Crest Pad(s) and Crest Pad Buildings. A brief summary of this activity will be provided.

5.6.6.9 Heating and Ventilation for Crest Pad Buildings. A brief summary of this activity will be provided.

5.6.6.10 ICDF Site Monitoring Instrumentation. A brief summary of this activity will be provided.

5.6.6.11 Components and Facilities for Pumping and/or Gravity Flow of Leachate. A brief summary of this activity will be provided.

5.6.7 Security and Inspections

This section will identify the security measures and inspections that will be conducted at the project site.

5.6.8 Soil Excavation

This section will discuss the work elements related to excavation of the ICDF landfill and the ICDF evaporation pond as they pertain to the RA, and Section 2.2.3 may be referenced. Any precautions that will be required with excavation activities will be identified.

5.6.9 Soil Consolidation

This section will discuss the work elements related to soil consolidation, identify the extent of consolidation required, and identify what areas will require consolidation. Any precautions, such as prevention of the generation of fugitive dust, will be discussed.

5.6.10 Dust Control

This section will identify precautions taken to control dust emissions and the associated activities that may require dust control.

5.6.11 ICDF Landfill

This section will discuss the work elements as they relate to the ICDF landfill.

5.6.12 ICDF Evaporation Pond

This section will discuss the work elements as they relate to the ICDF evaporation pond.

5.6.13 Crest Buildings

This section will discuss the work elements as they relate to the crest buildings.

5.6.14 Test Pad

This section will discuss the work elements as they relate to the test pad.

5.6.15 ICDF Landfill Liner Construction

This section will discuss the work elements as they relate to the ICDF landfill liner construction.

5.6.16 ICDF Evaporation Pond Liner Construction

This section will discuss the work elements as they relate to the ICDF evaporation pond liner construction.

5.6.17 Instrumentation

This section will discuss the instrumentation that will be required to support the RA activities.

5.6.18 Leachate Collection System

This section will discuss the work elements as they relate to the leachate collection system.

5.6.19 Earthwork

This section will discuss the details associated with all earthwork activities as they pertain to the ICDF landfill, the ICDF evaporation pond, and associated components.

5.6.20 Reclamation Seeding

This section will discuss the reclamation seeding activities that may be implemented to impacted areas upon completion of all earthwork activities. The type of seeding, and other associated details, and relevant specifications will be identified.

5.6.21 Institutional Controls

This section will identify the establishment of the institutional control period following completion of field activities, and will reference the appropriate specification(s) and documents.

5.6.22 Demobilization

This section will discuss the demobilization activities that will take place at the site after all the RA activities have been satisfactorily completed.

5.7 Field Oversight/Construction Management

This section will identify the person who will be responsible for notifying the Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (IDEQ) of project activities, and who will serve as an interface between various entities. The entities will also be identified.

5.8 Inspections

This section will identify the protocol and plan for inspections, and will discuss the pre-final and final inspections, and any associated reports.

5.9 Operation and Maintenance Plan

This section will identify the Operation and Maintenance Plan (DOE/ID-10852) (DOE-ID 2001aa) that has been developed for the ICDF Complex and provide the appropriate reference.

5.10 Protocol and Coordination of Field Oversight

This section will identify the work activities that will follow standard INEEL protocol and procedures, and identify how such activities will be coordinated.

5.11 Waste Minimization Plan

This section will identify waste minimization methods that will be followed during construction of the ICDF landfill, evaporation pond, and associated components, and will reference the INEEL Pollution Prevention Plan (DOE/ID-10333) (DOE-ID 2000b).

5.12 Health and Safety Plan

This section will identify the health and safety plan (DOE/ID document number to be determined) developed for the ICDF Complex and provide the appropriate reference. Discussion of relevant emergency procedures will also be noted.

5.13 Waste Management Plan

This section will identify waste management methods that will be followed during construction of the ICDF landfill, evaporation pond, and associated components, and will reference the INEEL CERCLA Disposal Facility Construction Waste Management Plan (DOE/ID-10855) (DOE-ID 2001bb).

6. FIVE YEAR REVIEW

This section will identify the basis for five year reviews, address any associated standard procedures, protocols, or documents, and include a discussion of the closure of the unit.

7. REFERENCES

The following reports, studies, EDFs, and other stand-alone documents (presently being developed) are currently slated to serve as reference materials to the RD/RA Work Plan.

10 CFR 830.120, Title 10, "Energy," Part 830, "Nuclear Safety Management," Subpart A, "Quality Assurance Requirements," Section 8, "Scope," *Code of Federal Regulations, Office of the Federal Register*.

DOE-ID, 2001a, "Air Space Volume Calculations," EDF-ER-265, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001b, "Subsurface Consolidation Calculations," EDF-ER-266, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001c, "Landfill Compaction/Subsidence Study," EDF-ER-267, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001d, "Slope Stability Assessments," EDF-ER-268, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001e, "Leachate Generation Study," EDF-ER-269, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001f, "Storm Water Drainage Calculations," EDF-ER-270, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001g, "Evaporation Pond Sizing with Water Balance and Make-up Water Calculations," EDF-ER-271, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001h, "Soil Amendment Study," EDF-ER-272, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001i, "Permeable Reactive Barrier Decision Analysis," EDF-ER-273, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001j, "Leachate/Contaminant Reduction Time Study," EDF-ER-274, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001k, "Fate and Transport Modeling Results and Summary Report," EDF-ER-275, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001l, "Evaluation of Geotechnical Investigations and Calculations Required to Complete Design and Construction of the ICDF," EDF-ER-276, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001m, "Waste-Soil Design Ratio Calculations," EDF-ER-277, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001n, "Liner/Leachate Compatibility Study," EDF-ER-278, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001o, "Hydrologic Modeling of Final Cover," EDF-ER-279, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001p, "Leachate Collection System Design Analysis," EDF-ER-280, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001q, "Liner and Final Cover Long-Term Performance Evaluation and Final Cover Life Cycle Expectation," EDF-ER-281, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001r, "Seismic Evaluation of the ICDF Landfill and Evaporation Pond," EDF-ER-282, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001s, "Waste Acceptance Criteria for ICDF Landfill," DOE/ID-10865, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001t, "Waste Acceptance Criteria for ICDF Evaporation Pond," DOE/ID-10866, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001u, "Waste Placement Plan," EDF-ER-286, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001v, "Group 5 Monitoring System and Installation Plan," DOE/ID-10782, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001w, "Group 5 Long Term Monitoring Plan," DOE/ID-10783, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001x, "INEEL CERCLA Disposal Facility Construction Quality Assurance Plan for Excavation and Constructing and Testing of Clay Liner and Test Pad," DOE/ID-10849, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001y, "Construction Quality Assurance Plan for the INEEL CERCLA Disposal Facility – Annotated Outline," DOE/ID-10851, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001z, "Storm Water Pollution Prevention Plan," document number to be determined, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001aa, "INEEL CERCLA Disposal Facility Complex Operation and Maintenance Plan," DOE/ID-10852, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2001bb, "INEEL CERCLA Disposal Facility Construction Management Plan," DOE/ID-10855, Rev. 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2000a, Remedial Design/Remedial Action Scope of Work for Waste Area Group 3, Operable Unit 3-13, DOE/ID-10721, Rev. B, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 2000b, "INEEL Interim Pollution Prevention Plan," DOE/ID-10333, Rev. B, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

DOE-ID, 1999, *Final Record of Decision, Idaho Nuclear Technology and Engineering Center, Operable Unit 3-13*, DOE/ID-10660, Revision 0, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho.

EPA 1995, *Quality Assurance and Quality Control for Waste Containment Facilities*, EPA/600/SR-93/182, September, Environmental Protection Agency.

EPA 2001, *Requirements for Quality Assurance Project Plans*, EPA QA/R-5, March, Environmental Protection Agency.

ICDF Design Drawings, final numbers to be determined.

Specifications for the ICDF Remedial Design/Remedial Action Design, Operable Unit 3-13, SPC-1475.